

This application is based upon two previously-filed applications, namely U.S. Patent Application No. 08/221,375, filed April 1, 1994 and U.S. Patent Application No. 08/416,558, filed April 4, 1995. U.S. Patent Application No. 08/221,375 subsequently issued as U.S. Patent No. 5,528,118. That application and patent will hereafter be referred to as the 118 patent. U.S. Patent Application No. 08/416,558 issued as U.S. Patent No. 5,874,820. That application and patent will hereafter be referred to as the 820 patent.

The 118 patent disclosed an arrangement in which a wafer stage is mounted such that reaction forces caused by driving of the wafer stage are directed to a reaction frame that is dynamically isolated from a frame that mounts other portions of a photolithographic apparatus, such as, for example, a radiation source, a mask holder, and a projection system that focuses and projects an image from a mask onto the wafer held by the wafer stage.

The drawings and most of the disclosure of the 820 patent are directed to an arrangement in which the reaction forces generated by driving a mask (or reticle) stage are directed to a reaction frame (i.e., a window frame guide) that is dynamically isolated from other portions of the apparatus.

The 820 patent also incorporates by reference the disclosure of the 118 patent. See col. 3, lines 7-14 of the 820 patent. Additionally, the 820 patent states:

(1) at col. 2, lines 22-26:

It is to be understood that the present stage, with suitable modifications, is not restricted to supporting a reticle but also may be used as a wafer stage and is indeed not limited to photolithography applications but is generally suited to precision stages.

(2) at col. 3, lines 33-35:

Moreover if the present stage mechanism is to be used for other than a reticle stage, i.e. for supporting a wafer, aperture 30 is not needed.

(3) at col. 5, lines 11-25:

Base support structure 80 [which supports the window frame guide] is supported by its own support pillars or other conventional support elements (not shown in this drawing) to the ground, i.e. the surface of the earth or the floor of a building. An example of a suitable support structure is disclosed in above-referenced U.S. patent application Ser. No. 08/221,375 at FIGS. 1, 1B, 1C. This independent support structure for this portion of stage mechanism provides the above-described advantage of transmitting the reaction forces of the reticle stage mechanism drive motors away from the frame supporting the other elements of the photolithography apparatus, especially away from the optical elements including the projection lens and from the wafer stage, thereby minimizing vibration forces on the projection lens due to reticle stage movement.

Thus, the 820 patent includes the entire 118 patent disclosure, states that both the wafer stage and the reticle stage reaction forces can be dynamically isolated from other portions of the apparatus, and indicates that the window frame guide shown in the 820 patent can be mounted on the structure that supports the reaction frame of the 118 patent.

Accordingly, the 118 patent (having an April 1, 1994 U.S. filing date) clearly supports claims that only require isolation of reaction forces from one stage, such as the wafer stage. The 820 patent (having a U.S. filing of April 4, 1995) clearly supports claims directed to isolation of reaction forces caused by driving of a reticle stage, as well as claims directed to isolation of reaction forces caused by driving of two stages (i.e., a reticle stage and a wafer stage).

Item 1 of the Office Action objected to the disclosure for its repetitive references to the parent applications. The specification has been amended to reduce the number of references to the parent applications. These repetitive references were provided so that the record is clear as to which application the various portions of the present specification find support.

Withdrawal of the objection to the disclosure is requested.

Item 2 of the Office Action asserts that "[t]his application is not a proper continuation but instead is a continuation in part. ... This specification requires two separate and distinct parent applications to provide an enabling specification for the claimed invention...."

Applicant respectfully disagrees with the statements from the Office Action.

The present application is identical to the specification of the 820 patent, except that it includes the text from the 118 patent, which was incorporated by reference into the 820 patent as noted above (i.e., see col. 3, lines 7-14 of the 820 patent). As discussed above, and as will be demonstrated in more detail below, the 820 patent specification supports claims directed to the combination where the reaction forces caused by driving of a mask stage and a wafer stage are dynamically isolated. Thus, the present application is a continuation of the 820 patent and a continuation in part of the 118 patent as indicated in the Preliminary Amendment filed with this application. A proper CIP Declaration to that effect was filed on June 13, 2000. Applicant notes that Rule 53(b) permits the filing of continuation in part applications.

Item 3 of the Office Action objects to the specification as failing to provide proper antecedent basis for the claim 2 feature of a Lorentz force coupling the two motor parts. Page 10 of the specification has been amended to provide antecedent basis for the claim 2 features. No new matter is added by the amendment to page 10. The original application inherently disclosed Lorentz forces at least because one of ordinary skill in the art would recognize that the electromagnetic forces between the magnet tracks and coils of the X and Y drives are Lorentz forces.

Item 4 of the Office Action rejects claims 3 and 5 under 35 U.S.C. §112, second paragraph. This rejection is respectfully traversed.

Claim 3 recites that the drive unit (claims 1 and 3 recite a "drive unit", not a "first drive unit" as asserted in the Office Action) includes a first linear motor and a second linear motor. Claim 3 further recites that a stationary part of the second linear motor is attached to the second frame, the magnet system of the first linear motor is fastened to the object table, and the electric coil system of the first linear motor is fastened to the movable part of the second linear motor (which is displaceable parallel to the X-direction). This is not inconsistent with claim 1, which recites that a stationary part of the drive unit (e.g., the stationary part of the claim 3 second linear motor) is fastened to the second frame. Claim 1 does not recite that a portion of a first motor is fastened to the second frame, as the Office Action appears to assert.

Claim 5 (which corresponded to claim 12 of the 666 patent) has been amended to obviate the rejection.

Withdrawal of the rejection under 35 U.S.C. §112 is requested.

Item 5 of the Office Action requests Applicant to "apply each limitation or element of each of the copied claims to the disclosure of the application" and to comply with the requirements of 37 CFR 1.607(a), namely parts (a)(2), (a)(3) and (a)(5). As will be demonstrated below, some of the claims (claims 1-4) are supported by the 118 patent, while other claims (claims 5 and 6) are supported by the 820 patent. Thus, claims 1-4 in this application are entitled to the April 1, 1994 filing date of the 118 patent, whereas claims 5 and 6 are entitled to the April 4, 1995 filing date of the 820 patent.

With respect to 37 CFR 1.607(a)(2), Applicant proposes claim 1 of this application (which corresponds exactly to claim 1 of the 666 patent) as the count. With respect to 37 CFR 1.607(a)(3), Applicant submits that all claims of the 666 patent and all claims of this application correspond to the count.

The following tables demonstrate support in the 118 and/or 820 patents for the subject matter of claims 1-6, as specified in 37 CFR 1.607(a)(5). For ease of comparison, reference is made to the 118 patent (unless otherwise noted) and to the corresponding portions of the present application. (As noted in the application, the reference numerals of the drawings from the 118 patent have been changed to avoid the use of the same reference numeral to designate different elements. Thus, the reference numerals contained in the following tables correspond to the reference numerals used in the 118 and 820 patents, rather than to the reference numeral contained in the drawings filed with this application.)

Claim 1 of U.S. Application No. 09/449,762 - Claim 1 of U.S. Patent No. 5,844,666

Claim Features	666 Patent Disclosure	Support in 09/449,762
A positioning device with an object table	The lithographic device of Figs. 1-2 includes a substrate holder 1. C8/L64 - C9/L5.	The 118 patent discloses an apparatus that has many applications to many different types of instruments for precise positioning of objects. 118 patent col. 3, lines 3-6; 762 application page 5, lines 9-11. In a preferred embodiment, a photolithography instrument 10 includes an object or wafer or XY stage 30 that supports a wafer. Col. 3, line 45; page 6, lines 4-6.
And a drive unit by which the object table is displaceable over a guide parallel to at least an X-direction,	First positioning device 21 displaces the substrate holder 1 parallel to the X- and Y-directions (C8/L67 - C9/L5) over an upper surface 141 of a granite support 143 (C14/L16-18 and Figs. 3-4).	Linear drive motors include X drive coils 42X and 42X' and Y-driving members such as drive coils 44Y and 44Y' (col. 3, lines 53-64; page 6, lines 12-20), which move the stage 30 over an upper surface of wafer stage base 28 (col. 3, lines 41-50 and col. 5, lines 27-34; page 6, lines 4-10 and page 8, line 28 - page 9, line1).

Claim Features	666 Patent Disclosure	Support in 09/449,762
Which guide is fastened to a first frame of the positioning device	Granite support 143 is provided on the support plate 61 of the machine frame 45 (C14/L18-20).	As shown in Figs. 1B and 1C, the wafer stage base 28 is mounted on isolation pad or block system 20 via arms 18, , depending blocks 22, depending bars 26 and horizontal bars 27. Col. 3, lines 27-40; page 5, line 26 - page 6, line 3.
While a stationary part of the drive unit is fastened to a second frame of the positioning device	First positioning device 21 includes first linear motor 147, second linear motor 149 and third linear motor 151. C14/L25-27. A stationary part 153 of the second linear motor 149 is fastened on an arm 155, which is fastened to the base 39 of a force frame 41. C14/L30-33.	A reaction frame assembly 60 (col. 4, lines 5-9; page 6, lines 26-29) supports and guides an X follower 72 and a Y follower 82 (col. 4, lines 10-22; page 6, line 30 - page 7, line 7). Drive elements such as drive tracks 78 and 78' are mounted on arms 74 and 74' of the X follower 72, and cooperate with the drive elements 42X, 42X' of the XY stage 30. Col. 4, lines 23-33; page 7, lines 8-15. Drive elements such as drive tracks 88 and 88' are mounted on arms 84 and 84' of the Y follower 82, and cooperate with the drive elements 44X, 44X' of the XY stage 30. Col. 4, line 63 - col. 5, line 7; page 8, lines 4-12. The drive tracks 78, 78' and 88, 88' are stationary parts of the drive for the stage 30.

Claim Features	666 Patent Disclosure	Support in 09/449,762
Which is dynamically isolated from the first frame, wherein a reaction force exerted by the object table on the drive unit during operation and arising from a driving force exerted by the drive unit on the object table is transmittable exclusively into the second frame.	The force frame 41 is dynamically isolated from the machine frame 45 by dynamic isolators 51. C10/L62-67 and C13/L48-54. Thus, reaction forces exerted by the substrate holder 1 on the first positioning device 21 are transmitted exclusively to the force frame 41. C15/L45-60.	The reaction frame 61 is directly supported on the foundation 21 by the four support posts 62 independently from the wafer stage base 28. Col. 7, lines 17-19; page 11, lines 25-26. Thus, the reaction force generated in moving the stage 30 are coupled to the reaction frame 61, not the to the stage 30. Col. 6, lines 12-14 and col. 7, lines 24-27; page 10, lines 2-4 and page 11, lines 30-32.

Claim 2 of U.S. Application No. 09/449,762 - Claim 2 of U.S. Patent No. 5,844,666

Claim Features	666 Patent Disclosure	Support in 09/449,762
A positioning device as claimed in claim 1, wherein the object table is coupled to the stationary part of the drive unit exclusively by a Lorentz force of a magnet system and an electric coil system of the drive unit during operation.	The substrate holder 1 is coupled to the movable part 165 of the linear motor 151 exclusively by a Lorentz force perpendicular to the Z-direction during operation. C14/L50-53. The movable part 165 of the linear motor 151 is, in turn, coupled to the stationary part 153 of the linear motor 149 via the stationary part 161 of the linear motor 151, which is coupled to the movable part 159 of the linear motor 149. C14/L30-41.	The stage 30 is coupled to the tracks 78, 78', 88 and 88' only by the electromagnetic forces between those tracks and the corresponding drive coils 42X, 42X', 44Y, 44Y' on the stage 30; there is no direct contact between the stage 30 and the reaction frame 61. Col. 5, lines 27-44; page 8, line 28 - page 9, line 7. The electromagnetic forces between the magnet tracks and coils of the X and Y drives are Lorentz forces.

Claim 3 of U.S. Application No. 09/449,762 - Claim 3 of U.S. Patent No. 5,844,666

Claim Features	666 Patent Disclosure	Support in 09/449,762
A positioning device as claimed in claim 2, wherein the magnet system and the electric coil system belong to a first linear motor of the drive unit,	The substrate holder 1 is displaced parallel to the X- and Y-directions by means of the Lorentz force of the linear motor 147. C15/L8-15 and C15/L21-28.	The linear motors include magnets 42X, 42X', 44Y, 44Y' and drive tracks 78, 78', 88, 88' comprised of magnets. Col. 3, lines 53-64, col. 4, lines 24-30 and col. 4, line 63 - col. 5, line 7; page 6, lines 12-20, page 7, lines 8-13 and page 8, lines 4-12.
Which drive unit comprises a second linear motor with a stationary part fastened to the second frame and a movable part which is displaceable parallel to the X-direction over a guide of the stationary part,	The linear motor 151 includes a stationary part 161, fastened to the force frame 41 via the linear motor 149 (C14/L30-33 and C14/L36-38), and a movable part 165 that is movable over a guide 163 of the stationary part 161, which extends in the X-direction. C14/L36-41.	Y follower 82 includes arms 84 and 84'. Ends of the arms 84, 84' are guided on separate guide rails 67, 67', 68, 68', which extend in the X-direction. A drive mechanism 87 moves the follower 82 in a direction perpendicular to the Y-direction (i.e., in the X-direction). Col. 4, line 63 - col. 5, line 7; page 8, lines 4-12.
The magnet system of the first linear motor being fastened to the object table	The linear motor 147 is similar to the linear motor linear motor 69 of the second positioning device 31 (C14/L44-67), which includes magnets fastened to the mask holder 5 (C11/L29-42).	The coupling elements could be reversed so that the coils would be mounted on the X follower and the magnets mounted on the XY stage. Col. 4, lines 30-33; page 7, lines 13-15.
And the electric coil system of the first linear motor being fastened to the movable part of the second linear motor.	The coil holder 169 of the linear motor 147 is fastened to the movable part 165 of linear motor 151. C14/L41-44.	Tracks 88, 88' are mounted to arms 84, 84'. Col. 4, lines 63-66; page 8, lines 4-6. The coupling elements could be reversed so that the coils would be mounted on the X follower and the magnets mounted on the XY stage. Col. 4, lines 30-33; page 7, lines 13-15.

Claim 4 of U.S. Application No. 09/449,762 - Claim 10 of U.S. Patent No. 5,844,666

Claim Features	666 Patent Disclosure	Support in 09/449,762
A lithographic device with a machine frame which, seen parallel to a vertical Z-direction, supports in that order a radiation source, a mask holder, a focusing system with a main axis directed parallel to the Z-direction, and a substrate holder which is displaceable perpendicularly to the Z-direction by means of a positioning device,	The lithographic device of Figs. 1-2 includes, parallel to a vertical Z-direction, a substrate holder 1, a focusing system 3, a mask holder 5 and a radiation source 7. C8/L55-65. A machine frame 45 of the lithographic device supports the substrate holder, the focussing system, the mask holder and the radiation source. C10/L59-62. First positioning device 21 displaces the substrate holder 1 parallel to the X- and Y-directions (C8/L67 - C9/L5).	The 118 patent discloses an apparatus that has many applications to many different types of instruments for precise positioning of objects. 118 patent col. 3, lines 3-6; 762 application page 5, lines 9-11. In a preferred embodiment, a photolithography instrument 10 includes the following components supported on isolation pad or block system 20: illuminator 14, mask holder RST, projection optical system 16 and an object or wafer or XY stage 30 that supports a wafer. Fig. 1B, col. 3, line lines 3-40; page 5, line 9 - page 6, line 11.
the positioning device of the substrate holder including an object table	The lithographic device of Figs. 1-2 includes a substrate holder 1. C8/L64 - C9/L5.	Object or wafer or XY stage 30 that supports a wafer. Col. 3, line 45; page 6, lines 4-6.
and a drive unit by which the object table is displaceable over a guide parallel to at least an X-direction,	First positioning device 21 displaces the substrate holder 1 parallel to the X- and Y-directions (C8/L67 - C9/L5) over an upper surface 141 of a granite support 143 (C14/L16-18 and Figs. 3-4).	Linear drive motors include X drive coils 42X and 42X' and Y-driving members such as drive coils 44Y and 44Y' (col. 3, lines 53-64; page 6, lines 12-20), which move the stage 30 over an upper surface of wafer stage base 28 (col. 3, lines 41-50 and col. 5, lines 27-34; page 6, lines 4-10 and page 8, line 28 - page 9, line1).
which guide is fastened to a first frame of the positioning device	Granite support 143 is provided on the support plate 61 of the machine frame 45 (C14/L18-20).	As shown in Figs. 1B and 1C, the wafer stage base 28 is mounted on isolation pad or block system 20 via arms 18, , depending blocks 22, depending bars 26 and horizontal bars 27. Col. 3,

Claim Features	666 Patent Disclosure	Support in 09/449,762
		lines 27-40; page 5, line 26 - page 6, line 3.
while a stationary part of the drive unit is fastened to a second frame of the positioning device	First positioning device 21 includes first linear motor 147, second linear motor 149 and third linear motor 151. C14/L25-27. A stationary part 153 of the second linear motor 149 is fastened on an arm 155, which is fastened to the base 39 of a force frame 41.	A reaction frame assembly 60 (col. 4, lines 5-9; page 6, lines 26-29) supports and guides an X follower 72 and a Y follower 82 (col. 4, lines 10-22; page 6, line 30 - page 7, line 7). Drive elements such as drive tracks 78 and 78' are mounted on arms 74 and 74' of the X follower 72, and cooperate with the drive elements 42X, 42X' of the XY stage 30. Col. 4, lines 23-33; page 7, lines 8-15. Drive elements such as drive tracks 88 and 88' are mounted on arms 84 and 84' of the Y follower 82, and cooperate with the drive elements 44X, 44X' of the XY stage 30. Col. 4, line 63 - col. 5, line 7; page 8, lines 4-12. The drive tracks 78, 78' and 88, 88' are stationary parts of the drive for the stage 30.
which is dynamically isolated from the first frame,	The force frame 41 is dynamically isolated from the machine frame 45 by dynamic isolators 51. C10/L62-67 and C13/L48-54.	The reaction frame 61 is directly supported on the foundation 21 by the four support posts 62 independently from the wafer stage base 28. Col. 7, lines 17-19; page 11, lines 25-26.
wherein the first frame of the positioning device of the substrate holder belongs to the machine frame of the lithographic device,	The first frame of the positioning device 21 is the machine frame 45 of the lithographic device. C19/L39-41.	The block system 20 to which the object stage base 28 is mounted also mounts the other main components of the machine as described above.
while the second frame of the positioning device of the substrate holder belongs to a	The second frame of the positioning device 21 is the force frame 41 of the	The reaction frame 61 is directly supported on the foundation 21 by the four

Claim Features	666 Patent Disclosure	Support in 09/449,762
force frame of the lithographic device which is dynamically isolated from the machine frame;	lithography device. C19/L41-42. The force frame 41 is dynamically isolated from the machine frame 45 by dynamic isolators 51. C10/L62-67 and C13/L48-54.	support posts 62 independently from the wafer stage base 28. Col. 7, lines 17-19; page 11, lines 25-26.
and wherein a reaction force exerted by the object table on the drive unit during operation and arising from a driving force exerted by the drive unit on the object table is transmittable exclusively into the second frame.	Reaction forces exerted by the substrate holder 1 on the first positioning device 21 are transmitted exclusively to the force frame 41. C15/L45-60.	Reaction force generated in moving the stage 30 are coupled to the reaction frame 61, not the to the stage 30. Col. 6, lines 12-14 and col. 7, lines 24-27; page 10, lines 2-4 and page 11, lines 30-32.

Original Claim 5 of U.S. Application No. 09/449,762 - Claim 12 of U.S. Patent No. 5,844,666

Claim Features	666 Patent Disclosure	Support in 09/449,762
A lithographic device as claimed in claim 4, wherein the mask holder is displaceable perpendicularly to the Z-direction by means of said positioning device,	Second positioning device 31 displaces the mask holder 5 parallel to the X-direction. C9/L9-14.	The 820 patent incorporates by reference the disclosure of the 118 patent (820 patent col. 3, lines 7-14), and thus discloses all of the features recited in claim 4. Reticle stage 10 supports a reticle 24 (820 patent col. 3, lines 15-26; page 13, lines 21-29), and is driven along the Y axis by motor coils 68A and 68B mounted respectively on the left and right edges of the stage 10. 820 patent col. 4, lines 39-41; page 15, lines 22-23.
and wherein the first frame of the positioning device of the mask holder belongs to the machine frame of the lithographic device,	A permanent-magnet holder 83 of the linear motor 69 of the positioning device 31 is fastened to the block 63 of the mask holder 5 (C11/L29-31), which in turn is guided over guides 65 of support member	The motor coils 68A and 68B are mounted respectively on the left and right edges of the stage 10. 820 patent col. 4, lines 39-41; page 15, lines 22-23. The stage 10 is supported over a smooth upper surface of

	57 (C11/L11-14), which is part of the machine frame 45 (C11/L6-9). The first frame of the positioning device 31 is the machine frame 45 of the lithographic device. C19/L39-41.	a base structure 32 of, e.g., granite, steel or aluminum. 820 patent col. 3, lines 36-41; page 14, lines 3-6. As shown in Figs. 2, 3A and 3B of the 820 patent, the base structure 32 is mounted on supporting structure 94, which also supports the projection lens (i.e., it is the machine frame), which is separated from window frame guide members (i.e., the force frame). 820 patent col. 5, lines 61-64 and col. 5, lines 5-11; page 17, lines 22-26 and page 16, lines 13-17.
while the second frame of the positioning device of the mask holder belongs to the force frame of the lithographic device.	A stationary part 73 of the linear motor 71 of the positioning device 31 is fastened to the force frame 41. C11/L18-23 and C13/L15-17. The second frame of the positioning device 31 is the force frame 41 of the lithographic device. C19/L41-42.	The motor coils 68A and 68B move in magnetic tracks 70A and 70B, respectively, which are mounted in the window frame guide members 40C and 40D. 820 patent col. 4, lines 41-44; page 15, lines 23-26. Window frame guide members 40C and 40D are part of a window frame guide (820 patent col. 3, line 58 - col. 4, line 5; page 14, lines 19-29), which is supported by base support structure 80 (820 patent col. 5, lines 5-11; page 16, lines 13-17), which in turn can be supported by four pillars 114A-D and four bracket structure 116A-D (820 patent col. 6, lines 39-45; page 18, lines 23-28). Another example of structure for supporting the base support structure 80 is shown in Figs. 1, 1B and 1C of the 118 patent. 820 patent col. 5, lines 11-25; page 16, lines 17-28.

Claim 6 of U.S. Application No. 09/449,762 - Claim 11 of U.S. Patent No. 5,844,666

Claim Features	666 Patent Disclosure	Support in 09/449,762
A lithographic device with a machine frame which, seen parallel to a vertical Z-direction, supports in that order a radiation source, a mask holder which is displaceable perpendicularly to the Z-direction by means of a positioning device, a focusing system with a main axis directed parallel to the Z-direction, and a substrate holder which is displaceable perpendicularly to the Z-direction by means of a further positioning device,	The lithographic device of Figs. 1-2 includes, parallel to a vertical Z-direction, a substrate holder 1, a focusing system 3, a mask holder 5 and a radiation source 7. C8/L55-65. A machine frame 45 of the lithographic device supports the substrate holder, the focussing system, the mask holder and the radiation source. C10/L59-62. First positioning device 21 displaces the substrate holder 1 parallel to the X- and Y-directions (C8/L67 - C9/L5). Second positioning device 31 displaces the mask holder 5 parallel to the X-direction. C9/L9-14.	The 820 patent incorporates by reference the disclosure of the 118 patent (820 patent col. 3, lines 7-14), and thus discloses all of the structure disclosed in the 118 patent. The 118 patent discloses a photolithography instrument 10 that includes the following components supported on isolation pad or block system 20: illuminator 14, mask holder RST, projection optical system 16 and an object or wafer or XY stage 30 that supports a wafer. 118 patent Fig. 1B, col. 3, line lines 3-40; page 5, line 9 - page 6, line 11. The mask holder (reticle stage 10) of the 820 patent supports a reticle 24 (820 patent col. 3, lines 15-26; page 13, lines 21-29), and is driven along the Y axis by motor coils 68A and 68B mounted respectively on the left and right edges of the stage 10. 820 patent col. 4, lines 39-41; page 15, lines 22-23.
the positioning device of the mask holder including an object table	The lithographic device of Figs. 1-2 includes a mask holder 5. C9/L9-14.	The reticle stage 10 of the 820 patent supports a reticle 24. 820 patent col. 3, lines 15-26; page 13, lines 21-29.
and a drive unit by which the object table is displaceable over a guide parallel to at least an X-direction,	Second positioning device 31 displaces the mask holder 5 parallel to the X-direction (C9/L9-14) over plane guides 65 which extend parallel to the X-direction (C11/L6-17 and Fig. 5).	The stage 10 of the 820 patent is supported over a smooth upper surface of a base structure 32 of, e.g., granite, steel or aluminum. 820 patent col. 3, lines 36-41; page 14, lines 3-6. Motor coils 68A and 68B are mounted respectively on the left and right edges of the stage 10.

Claim Features	666 Patent Disclosure	Support in 09/449,762
		820 patent col. 4, lines 39-41; page 15, lines 22-23. The motor coils 68A and 68B cooperate with magnetic tracks 70A, 70B to drive the stage 10 in the Y-direction. The tracks 70A, 70B are provided in frame members 40C, 40D, that are part of a window frame guide, which in turn is driven in the X-direction (in order to drive the stage 10 in the X-direction) by magnetic tracks 62A, 62B and coils 60A, 60B. 820 patent col. 3, line 58 - col. 6, line 44; page 14, line 19 - page 15, line 26.
which guide is fastened to a first frame of the positioning device	Guides 65 are part of support member 57, which belongs to machine frame 45. C11/L6-8 and C10/L45-49.	As shown in Figs. 2, 3A and 3B of the 820 patent, the base structure 32 is mounted on supporting structure 94, which also supports the projection lens (i.e., it is the first or machine frame), which is separated from window frame guide members (i.e., the second or force frame). 820 patent col. 5, lines 61-64 and col. 5, lines 5-11; page 17, lines 22-26 and page 16, lines 13-17.
while a stationary part of the drive unit is fastened to a second frame of the positioning device	Second positioning device 31 includes first linear motor 69 and second linear motor 71. C11/L18-21. A stationary part 73 of the second linear motor 71 is fastened to a column 43 of a force frame 41. C11/L21-23.	Magnetic tracks 70A and 70B are mounted in the window frame guide members 40C and 40D. 820 patent col. 4, lines 41-44; page 15, lines 23-26. Window frame guide members 40C and 40D are part of a window frame guide (820 patent col. 3, line 58 - col. 4, line 5; page 14, lines 19-29), which is supported by base support structure 80 (820

Claim Features	666 Patent Disclosure	Support in 09/449,762
		patent col. 5, lines 5-11; page 16, lines 13-17), which in turn can be supported by four pillars 114A-D and four bracket structure 116A-D (820 patent col. 6, lines 39-45; page 18, lines 23-28). Another example of structure for supporting the base support structure 80 is shown in Figs, 1, 1B and 1C of the 118 patent. 820 patent col. 5, lines 11-25; page 16, lines 17-28.
which is dynamically isolated from the first frame,	The force frame 41 is dynamically isolated from the machine frame 45 by dynamic isolators 51. C10/L62-67 and C13/L48-54.	As shown in Figs. 2, 3A and 3B of the 820 patent, the supporting structure 94 (i.e., the machine frame) is separated from window frame guide members (i.e., the force frame). 820 patent col. 5, lines 61-64 and col. 5, lines 5-11; page 17, lines 22-26 and page 16, lines 13-17.
wherein the first frame of the positioning device of the mask holder belongs to the machine frame of the lithographic device,	The first frame of the positioning device 31 is the machine frame 45 of the lithographic device. C19/L39-41.	As described above, the supporting structure 94 to which the stage base structure 32 is mounted also mounts the other main components of the lithography device.
while the second frame of the positioning device of the mask holder belongs to a force frame of the lithographic device which is dynamically isolated from the machine frame;	The second frame of the positioning device 31 is the force frame 41 of the lithography device. C19/L41-42. The force frame 41 is dynamically isolated from the machine frame 45 by dynamic isolators 51. C10/L62-67 and C13/L48-54.	The window frame guide is supported by outer structure 80, which is separate from the structure supporting the stage base structure 32. 820 patent col. 5, lines 5-11 and col. 5, lines 61-64; page 16, lines 13-17 and page 17, lines 22-26.
and wherein a reaction force exerted by the object table on the drive unit during operation and arising from a driving	Reaction forces exerted by the mask holder 5 on the second positioning device 31 are transmitted exclusively to the	The reaction forces of the reticle stage mechanism drive motors are transmitted away from the frame supporting the

Claim Features	666 Patent Disclosure	Support in 09/449,762
force exerted by the drive unit on the object table is transmittable exclusively into the second frame.	force frame 41. C13/L17-33.	other elements of the photolithography apparatus. 820 patent col. 5, lines 17-25 and col. 5, lines 61-64; page 16, lines 22-28 and page 17, lines 22-26.

Item 7 of the Office Action rejects claims 1, 2 and 4-6 under 35 U.S.C. §102(e) over U.S. Patent No. 6,072,183 to Itoh et al. This rejection is respectfully traversed.

U.S. Patent No. 6,072,183 to Itoh et al. is a continuation of an application which is a continuation of another application which issued as U.S. Patent No. 5,260,580 (the 580 patent). Thus, the disclosure of Itoh et al. is identical to the disclosure of the 580 patent. The 580 patent is discussed in cols. 1-2 of the 666 patent, and was considered by the Examiner who issued the 666 patent. Applicant respectfully submits that claims 1, 2 and 4-6 of this application are patentable over Itoh et al. for the same reasons that the Examiner of the 666 patent allowed 666 patent claims 1, 2 and 10-12 over the 580 patent.

In view of the foregoing, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited.

Should the Examiner believe anything further would be desirable to place this application in even better condition for allowance, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number listed below.

Respectfully submitted,



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